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(54) **Feed-forward amplifier and controller of the same**

(57) A base pilot signal that is output from an oscillator (20) and a local oscillation signal that is output from an oscillator (21) are input to an injection-side mixer (22) so that two types of second pilot signals, sum frequency and difference frequency, are generated and injected into a distortion detection loop. Part of a signal appearing at an output terminal (2) is branched, converted in frequency by a detection-side mixer (23) using the local oscillation signal, filtered at a narrow-band filter (24), in-

put to a synchronizing detector (25) with the filtered output as error signals (ErrI, ErrQ), and synchronizing detected with reference to the base pilot signal so as to generate control signals for a distortion rejection loop. The spectrums of the second pilot signals may be spread. A process to cancel the input signal component may be performed at the detection side. A simple circuit configuration enhances the distortion component rejection and suppression effect and shortens the time required until an optimum control state is established.

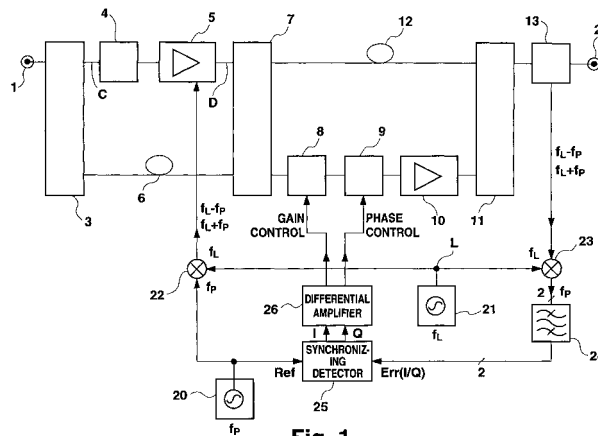


Fig. 1



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			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
			H03F
The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
The Hague		1 March 2005	Feuer, F
CATEGORY OF CITED DOCUMENTS			
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	

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**ANNEX TO THE EUROPEAN SEARCH REPORT
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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

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